

above said substrate for determining the thickness of said thin polymer layer disposed on said substrate.

6. An apparatus according to claim 5, wherein said ellipsometer has optical parts (lenses) provided with covers for protecting said lenses.

*Added*

7. An apparatus according to claim 5, wherein said arrangement for providing said thin polymer layer includes means for supplying said polymer to said substrate and said substrate is supported by a support structure, which is rotatable about a vertical axis and which is rotated to subject the polymer solution supplied to said substrate to centrifugal forces for spreading said polymer solution on said substrate to form said thin polymer layer.

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Add new claims as follows:

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9. An apparatus according to claim 1, wherein, for determining the molecular weight of the polymer, the relationship used is

*x1*

$$\text{Layer thickness } d \sim [\eta]^{1/3}$$

$$\text{and } [\eta] = KM^A \quad (\text{Staudinger equation})$$

wherein,

$[\eta]$  =intrinsic viscosity number

K = constant [volume/mass]

A = constant, and

M = molecular weight.

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10. A method according to claim 3, wherein said solvent is applied for 5 - 10 seconds.

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